WAR DEPARTMENT TECHNICAL MANUAL

TM 11-1145 CONFIDENTIAL

BEACON TRANSMITTER-RECEIVER AN/PPN-2

WAR DEPARTMENT 19 AUGUST 1944

DESTRUCTION NOTICE

WHY—To prevent the enemy from using or salvaging this equipment for his benefit.

WHEN—When ordered by your commander.

HOW—1. Pull headset plug out of jack and pull antenna mast out of hole in beacon. Unscrew red DEST cap from panel. It will remain attached by a wire. Jerk the cap away until the wire pulls out of the beacon. THIS IGNITES THE DETONATOR FUSE. Get at least 25 feet away within 3 seconds.

2. If possible, destroy and/or bury the antenna and antenna rods.

LEAVE NOTHING THAT CAN BE USED OR RECOGNIZED:

WHAT—1. Detonate—The receiver-transmitter.

2. Smash —The remaining parts.

3. Cut —The antenna and counterpoise rods and the antenna cable.

4. Burn —All instruction books.

5. Bury or scatter—All parts.

DESTROY EVERYTHING

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WARNING

DESTRUCTOR

This equipment contains a high explosive destructor, located under the red cap marked DEST on the top panel of the receiver-transmitter unit. Do not remove this red cap under any circumstances unless it becomes necessary to destroy the set. If the red cap is removed and the attached wire is pulled by accident, RUN, get at least 25 feet away within 3 seconds.

HIGH VOLTAGES

Voltages used in this equipment are high enough to cause severe shock if contacted. Extreme caution must be exercised when working on the equipment with the metal housing cover removed. The high-voltage circuits have no bleeders; the filter capacitors must therefore be discharged manually after the power switch is turned off.

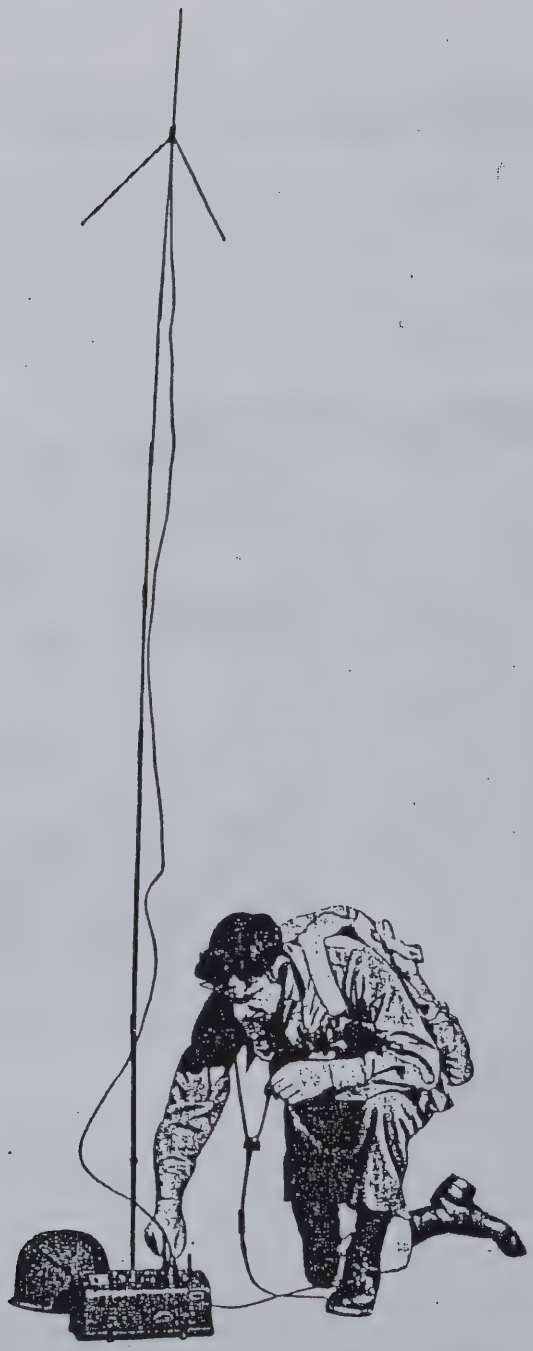

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Figure 1. Beacon in operation.

FIRST AID TREATMENT FOR ELECTRIC SHOCK

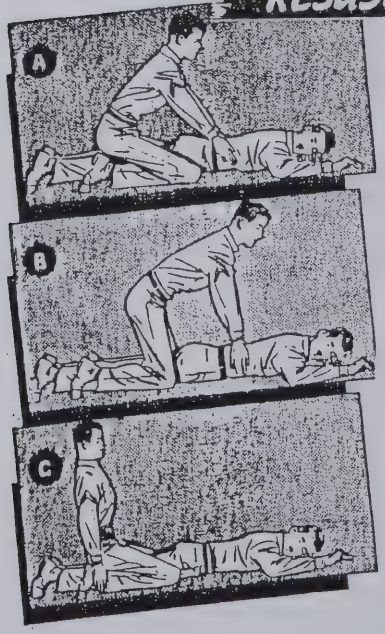
I. FREE THE VICTIM FROM THE CIRCUIT IMMEDIATELY.

Shut off the current. If this is not immediately possible, use a dry nonconductor (rubber gloves, rope, board) to move either the victim or the wire. Avoid contact with the victim. If necessary to cut a live wire, use an axe with a dry wooden handle. Beware of the resulting flash.

II. ATTEND INSTANTLY TO THE VICTIM'S BREATHING.

Begin resuscitation at once on the spot. Do not stop to loosen the victim's clothing. Every moment counts. Keep the patient warm. Wrap him in any covering available. Send for a doctor. Remove false teeth or other obstructions from the victim's mouth.

RESUSCITATION



POSITION

1. Lay the victim on his belly, one arm extended directly overhead, the other arm bent at the elbow, the face turned outward and resting on hand or forearm, so that the nose and mouth are free for breathing (fig. A).

2. Straddle the patient's thighs, or one leg, with your knees placed far enough from his hip bones to allow you to assume the position shown in figure A.

3. Place your hands, with thumbs and fingers in a natural position, so that your palms are on the small of his back, and your little fingers just touch his lowest ribs (fig. A).

FIRST MOVEMENT

4. With arms held straight, swing forward slowly, so that the weight of your body is gradually brought to bear upon the victim. Your shoulders should be directly over the heels of your hands at the end of the forward swing (fig. B). Do not bend your elbows. The first movement should take about 2 seconds.

SECOND MOVEMENT

5. Now immediately swing backward, to remove the pressure completely (fig. C).

6. After 2 seconds, swing forward again. Repeat this pressure-and-release cycle 12 to 15 times a minute. A complete cycle should require 4 or 5 seconds.

CONTINUED TREATMENT

7. Continue treatment until breathing is restored or until there is no hope of the victim's recovery. Do not give up easily. Remember that at times the process must be kept up for hours.

8. During artificial respiration, have someone loosen the victim's clothing. Wrap the victim warmly; apply hot bricks, stones, etc. Do not give the victim liquids until he is fully conscious. If the victim must be moved, keep up treatment while he is being moved.

9. At the first sign of breathing, withhold artificial respiration. If natural breathing does not continue, immediately resume artificial respiration.

10. If operators must be changed, the relief operator kneels behind the person giving artificial respiration. The relief takes the operator's place as the original operator releases the pressure.

11. Do not allow the revived patient to sit or stand. Keep him quiet. Give hot coffee or tea, or other internal stimulants.

HOLD RESUSCITATION DRILLS REGULARLY

CHAPTER 1
GENERAL DESCRIPTION

1. SCOPE OF THE MANUAL. This manual is prepared to acquaint instructors and maintenance men with Beacon Transmitter-Receiver AN/PPN-2. The manual is primarily a handbook of practical instructions for the preparation, operation, testing, and maintenance of the equipment. The chapters in the manual are:

1. General description.
2. Installation and operation.
3. Circuit analysis.
4. Maintenance.
5. Supplementary data.

In this manual, Beacon Transmitter-Receiver AN/PPN-2 is occasionally referred to as *the beacon.*

2. PURPOSE.

a. Nature of Equipment (fig. 2). Beacon Transmitter-Receiver AN/PPN-2 is a compact, light-weight responder-beacon. It is highly portable and can be quickly set up and operated by one man who has not had extensive training in its operation.

b. Uses (fig. 3). The tactical applications of the beacon are based primarily on the ease and speed with which it can be transported and set up for operation. It is readily carried by one man and requires only one man to set it up and operate it. As illustrated in figure 3, it is used in conjunction with aircraft carrying the associated airborne interrogation equipment, to perform the functions listed below. Briefly its operation is as follows: The airborne equipment radiates pulses of radio-frequency energy called interrogating pulses, which, when received by the beacon, automatically trigger it into operation. The beacon then radiates answering pulses of radio-frequency energy called reply pulses. These reply pulses, when received by the airborne equipment, enable the aircraft personnel to determine the position of the beacon with respect to the plane, and at the same time provide a means of communication between the aircraft personnel and the man on the ground who is operating the beacon. The beacon ordinarily transmits only when receiving interrogating pulses.

Figure 2. Beacon Transmitter-Receiver AN/PPN-2, components.